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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,475	08/10/2001	Kinzo Korehisa	1155-0224P	6148

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EXAMINER

BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,475

Applicant(s)

KOREHISA ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-22, 26-28, 30-32 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) 5-21, 26 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22, 28 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 37-39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The rejections presented in the non-final Office action mailed 17 September 2003 have been maintained.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokuraku et al.

4. From a prior Office action:

Gokuraku discloses foamed polypropylene base resins, where the base resin has a melt tension of 10 gf or above and a melt flow rate of at least 0.5 g/10 min (abstract). Peroxides are added to the polypropylene resins to crosslink to a gel fraction of less than 1% (col. 6 lines 18-41). Peroxides include bis(4-butylcyclohexyl)peroxydicarbonate (col. 7 lines 1-7). The starting polypropylene compounds can be mixed with polypropylene or other resins (col. 7 lines 49-67). However, the reference does not suggest a preferred amount of blended unmodified polypropylene resin to be included in the composition. The applicant's claimed range of 1-50% by weight is broad in that it includes very small amounts but also includes a 50/50 mixture. The invention is drawn to modified polypropylene materials having improved expansion ratio properties but teaches that amounts of other materials may be blended. Thus, one skilled in the art reading Gokuraku and considering the inclusion of small amounts of polypropylene would envision using a minor amount of the unmodified polypropylene. It is the examiner's position that, because the invention is drawn to modified polypropylene foams, it would have been prima facie obvious to include only small amounts (at most a simple minority) of unmodified polypropylene and expect to obtain the same improved expansion ratio.

5. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokuraku et al. in view of Akzo Nobel.
6. From a prior Office action:

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Gokuraku applies as above, preferring the use of polypropylene resins as base resins having melt flow rates above 0.5 g/10 min. and describing the mixing of peroxide with polypropylene resin at elevated temperatures to a gel fraction less than 1% (col. 6 lines 18-41). However, the reference does not specifically mention melt flow rate of the starting polypropylene polymer, the temperature for combining the peroxide and polypropylene, or the weight percentage of peroxide needed. Akzo teaches that polypropylene compositions having improved melt strength can be formed by melt mixing a peroxydicarbonate with a polypropylene having a melt flow index above 0.5 g/10 min. in an extruder or kneader at a temperature between 170 and 225 °C, and extruding the mixture (p. 4 line 2-31). The peroxydicarbonate is used in amounts of 0.1-10 meq (0.04-4 g peroxide / 100 g polypropylene) (p. 6 lines 17-21). Since Gokuraku is also concerned with melt properties of the compositions, it is the examiner's position that it would have been prima facie obvious to use the parameters of Akzo's invention in the formation of Gokuraku's base resin to form compositions of improved melt strength.

Gokuraku applies as above, teaching the use of certain peroxides *and the like*, but failing to mention the use of dicetyl peroxydicarbonate. Akzo prefers the use of certain peroxides that are solid at room temperature, including bis (4-t-butylcyclohexyl) peroxydicarbonate and dicetyl peroxydicarbonate (col. 6 lines 7-12). Since the peroxides are taught as equivalents and are both solids at room temperature, it is the examiner's position that it would have been prima facie obvious to use dicetyl peroxydicarbonate in Gokuraku's invention in place of bis (4-t-butylcyclohexyl) peroxydicarbonate in the expectancy of forming compositions of equally improved melt strength.

Allowable Subject Matter

7. Claims 37-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. From a prior Office action:

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art, Gokuraku et al., teaches foamed polypropylene base resins, where the base resin has a melt tension of 10 gf or above and a melt flow rate of at least 0.5 g/10 min. The reference teaches modified polypropylene resins, to which other polypropylene resins may be added. However, the reference does not give guidance or otherwise indicate choosing the range of 5-20% by weight of the unmodified polypropylene. Therefore, it is the examiner's position that the specific combination claimed by the applicant would provide a novel and unobvious step over the prior art.

Response to Arguments

9. In response to the applicant's arguments that the primary reference fails to exemplify the use of an unmodified polypropylene with the modified polypropylene, it is noted that the reference as a whole suggests the use of an unmodified polypropylene with the modified polypropylene. The reference need not *exemplify* the claimed subject matter for the limitations to be rendered obvious.

10. Regarding the applicant's claim of unexpected results, it is first pointed out that the applicant has not pointed to comparative examples to show that the results obtained in the working examples are indeed unexpected. Comparative examples should resemble the closest prior art, which in this case would be a specific modified polypropylene. The applicants also have not shown that any unexpected results relate to the amounts of modified and unmodified polypropylene used; thus, it is not evident other factors do not contribute to the unexpected results. Furthermore, the applicants have not established that the endpoint of 50% unmodified polypropylene provides unexpected results over compositions just outside the claimed range. In fact, the applicant has not pointed to an example showing 50% of unmodified polypropylene present. Further still, the applicant has not pointed to examples showing that other polypropylene blends (having different properties than the one shown in the declaration) have unexpected results at the endpoint of 50% unmodified polypropylene when compared to those compositions just outside the claimed range.

Conclusion

11. This application contains claims 5-21, 26, and 27 are drawn to an invention nonelected with traverse in the paper filed 14 March 2003. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdb



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